

**Agricultural and Industrial.**

**Commercial Value of Fertilizers.**

We give below the promised calculations of commercial value of fertilizers, together with the tables (heretofore furnished by Prof. Kerr and published) by which those values were determined. Not being chemists ourselves, we cannot assert that the analyses are correct. We believe, however, that they are nearly enough correct for all practical purposes. We would earnestly recommend to all who habitually use fertilizers to verify our calculations, and thus become familiar with the methods by which chemists, after making analyses, determine commercial values of manures.

We again call the attention of our readers to the fact that the agricultural value of a manure may be very much greater or less than its commercial value. The commercial value of a gold dollar is about 1.12½ cents in greenbacks: its value as a manure is nothing.

The agricultural value can be tested by experience alone. Some of these compounds that our estimates rate low, may be skillfully mixed and may prove to be worth more, on the farm, than others that are, commercially, rated high. Besides, a manure found worthless to one man may prove itself excellent under the judicious handling of another.

These calculations are dry and uninteresting at first, but you will find them less repulsive as you become familiar with the names of the different components of the manures you are annually purchasing.

We are inclined to propose the formation of a class in Agricultural Chemistry, by commencing at first principles, and giving one column each week on the subject. We wish to learn it ourselves and hope we have numerous readers who wish to understand more of the subject, too. What say you, shall we begin a series of lessons in Agricultural Chemistry?

Table of values of the more important components of commercial manures:

	Value per lb.
Sol. and Prec. Phosphoric Acid,	15 cts.
Insoluble " "	5 "
Potash,	7 "
Nitrogen in Am., Nit. Acid, &c.,	25 "
Phosphoric Acid in Guanos, (about)	10 "
Sulphate of Lime (Gypsum),	1-2 "
Salt,	1-2 "
Lime,	1-3 "
Magnesia,	1-5 "
Organic Matter,	1-2 "
Sol. Salts of Soda,	1-2 "
Ammonia,	14-17 of Nit.

Per ct.	Lbs.	1-5	1-3	1-2	1	5	7	10	15	25	30
100	20	\$0.04	\$0.07	\$0.10	\$0.20	\$1.00	\$1.40	\$2.00	\$3.00	\$5.00	\$6.00
10	40	08	13	20	40	2.00	2.80	4.00	6.00	10.00	12.00
1	80	16	27	40	80	4.00	5.60	8.00	12.00	20.00	24.00
100	100	20	33	50	100	8.00	11.20	16.00	24.00	40.00	48.00
10	200	40	66	100	200	16.00	22.40	32.00	48.00	80.00	96.00
1	400	80	132	200	400	32.00	44.80	64.00	96.00	160.00	192.00
100	2,000	400	666	1,000	2,000	160.00	224.00	320.00	480.00	800.00	960.00

For convenience of calculation, the following table is added, in which the first column is the per cent., and the figures at the top the price per pound in cents, and the second column gives the number of pounds in a ton, corresponding to each per cent., and the others, the value in a ton, of any ingredient whose per cent. is found opposite in the left hand (1st) column, and its price per pound at the top:

**TOBACCO FERTILIZER.**

	PR. CT.	VALUE.
Sol. and Prec. Phos. Acid,	11.77	\$35.31
Insol. " "	3.36	3.36
Sol. Salts Potash,	0.79	1.10
" " Soda,	3.69	3.72
Ammonia,	1.00	4.17
Nitrogen in org. mat.	3.03	15.15

Commercial value per ton, \$59.41

**SOL. NAVASSA GUANO.**

Sol. and Prec. Phos. Acid,	11.10	\$33.30
Insol. " "	6.74	6.74
Sol. Salts Potash,	0.95	1.33

" " Soda,	2.17	.22
Nitrogen in org. matter,	2.07	10.35

Commercial value per ton, \$51.94

**P. ZELL & SONS.**

Sol. and Prec. Phos. Acid,	11.94	\$35.82
Insol. " "	2.56	2.56
Sol. Salts Potash,	1.05	1.47
" " Soda,	3.25	.32
Ammonia,	0.25	1.03
Nitrogen in org. mat.	1.58	7.90

Commercial value per ton, \$49.10

**STONEWALL.**

Sol. and Prec. Phos. Acid,	8.49	\$25.47
Insol. " "	1.66	1.66
Sol. Salts Potash,	5.88	8.23
" " Soda,	2.31	.23
Ammonia,	0.89	3.67
Nitrogen in org. mat.	1.96	9.80

Commercial value per ton, \$49.06

**STAR.**

Sol. and Prec. Phos. Acid,	12.12	\$36.36
Insol. " "	0.78	.78
Sol. Salts Potash,	2.40	3.36
" " Soda,	1.74	.17
Ammonia,		
Nitrogen in org. mat.	1.61	8.05

Commercial value per ton, \$48.72

**COTTON FERTILIZER.**

Sol. Prec. and Phos. Acid,	11.14	\$33.42
Insol. " "	23.3	2.33
Sol. Salts Potash,	1.87	2.62
" " Soda,	4.66	.47
Ammonia,	0.65	2.67
Nitrogen in org. mat.	1.17	5.85

Commercial value per ton, \$47.36

**SOL. PACIFIC GUANO.**

Sol. and Prec. Phos. Acid,	10.98	\$32.94
Insol. " "	3.82	3.82
Sol. Salts Potash,	0.22	.31
" " Soda,	0.61	.06
Ammonia,	0.52	2.14
Nitrogen in org. mat.	1.50	7.50

Commercial value per ton, \$46.77

**ACID PHOSPHATE—NAVASSA GUANO CO.**

Sol. and Prec. Phos. Acid,	12.17	\$36.51
Insol. " "	7.36	7.36
Sol. Salts Potash,	0.63	.88
" " Soda,	1.20	.12

Commercial value per ton, \$44.87

**BAUGH'S RAW BONE SUPERPHOSPHATE.**

Sample of 200 tons, in heap, at Works, drawn and certified by Abner E. Wills, and forwarded to Dr. F. A. Genth.

Moisture,	4.38	
Sol. and Prec. Phos. Acid,	8.47	\$26.67
Insol. " "	6.41	6.41
Potash,	1.60	2.24
Soda,	5.85	.58
Nitrogen in org. mat.	1.79	8.95

Commercial value per ton, \$44.85

**WHANN'S RAW BONE.**

Sol. Prec. and Phos. Acid,	9.61	\$28.83
Insol. " "	2.22	2.22
Sol. Salts Potash,	0.40	.56
" " Soda,	3.75	.37
Ammonia,	0.37	1.52
Nitrogen in org. mat.	2.14	10.70

Commercial value per ton, \$44.20

**BAHAMA SOL. GUANO.**

Sol. and Prec. Phos. Acid,	8.72	\$26.16
Insol. " "	3.07	3.07
Sol. Salts Potash,	0.51	.70
" " Soda,	3.90	.39
Ammonia,	0.39	1.61
Nitrogen in org. mat.	2.17	10.85

Commercial value per ton, \$42.78

**PEERLESS GUANO.**

Sol. and Prec. Phos. Acid,	8.64	\$25.92
Insol. " "	2.81	2.81
Sol. Salts Potash,	0.50	0.70
" " Soda,	3.73	0.37
Ammonia,	0.36	1.48
Nitrogen in org. mat.	2.26	11.30

Commercial value per ton, \$42.58

**CAROLINA FERTILIZER.**

Sol. and Prec. Phos. Acid,	9.11	\$27.33
Insol. " "	3.76	3.76
Sol. Salts Potash,	0.29	.40
" " Soda,	0.70	.07
Ammonia,	0.36	1.48
Nitrogen in org. mat.	1.61	8.05

Commercial value per ton, \$41.09

**SOL. SEA ISLAND GUANO.**

Sol. and Prec. Phos. Acid,	7.76	\$23.28
Insol. " "	5.00	5.00
Sol. Salts Potash,	1.66	2.32
" " Soda,	5.34	.53
Ammonia,		
Nitrogen in org. matter,	1.42	7.10

Commercial value per ton, \$38.23

**The Month of May.**

That farmer who is found at the end of this month well up with his work, will have but little trouble afterwards to keep up with the needs of his crop. Wishing to impress on all who consult this paper, for suggestion or advice, the importance of active exertion now, we have given "Thoughts for the Month of May," entire, from the *Southern Cultivator*, and similar reading from the *American Farmer*. While we shall always offer to you the best agricultural ideas we have, we propose also, to carefully collect and place before you the most valuable and practical hints of all the leading agricultural journals in the United States.

**Open to All.**

We take occasion to again remind our readers all, that they are invited at any and all times to use our columns in quest of information, or to convey it; to comment on what appears in the paper, or to dissent from it. Our columns are open to you, even if you wish to protest against what we have published in them.

Let us hear from you!

**The Fence Law Once More.**

*Editor State Agricultural Journal:*

No process so surely evolves truth out of the chaos of conflicting opinions, as honest and temperate discussion between persons entertaining opposing ideas. Our eyes take in, at one time, a view of only a very small part of the earth's surface. So the mind of one person often comprehends only a few of the considerations that invest an important subject—all of which sometimes present themselves readily, when viewed by many different observers, from as many different standpoints.

The first suggestion made by me in your paper, in regard to an abrogation of the fence laws, was presented as much for the purpose of drawing out the opinions of other persons, as to impress my own upon your readers. I have great confidence in the voice of the people on a subject which has been fully discussed before them, in which they are interested, with which they are familiar, and on which those who undertake to enlighten the people, have no interests hostile to those of the masses. I acknowledge myself, therefore, under obligations to my friend "Quankey," because he has, as a good citizen, told the people what things bearing on this subject, are in view from his standpoint.

Laws made by an autocrat or a despot—to be interpreted by judges, appointed by the same authority, and to be executed by officers selected by the same power that constituted the judges, all supported by military force under command of the creator of the judiciary and the executive agents of the government—need not be made in conformity to the wishes of the people—may, indeed, be effective as laws, in defiance of the will of the people. But where the people elect the law-makers, the interpreters of the law and the executors of it, these laws to have any force must reflect the will of the people. Hence I said in the beginning of what I wrote on this subject that I wished to see no change unless a decided majority of the people wanted the change. The abrogation of the fence laws would be followed by very different results if accomplished in pursuance of the decided and expressed will of the people, from what might follow ill-considered and hasty legislation to that end.

Again, reminding our friend "Quankey," as well as all your readers, that we do not advise the repeal of fence laws where timber is still very abundant and cheap, or when the "range" as he says "is to the cultivated ground as three to one," we review and sum up our advice on this subject as follows:

1. Let the people of all those townships of this State wherein timber is now so scarce and so costly that fencing of crops is felt to be a heavy burden, begin to agitate the question whether they had not better repeal the present fence laws, and in their stead, make it a misdemeanor for any man to allow his cattle to trespass on the lands of another. Let the proposition also include the plan to impound stock taken doing damage to land, and to make the stock caught liable for the damage done. Don't be afraid to discuss the subject. Truth delights in honest discussion. Don't treat the matter as if the proposition was intended for the benefit of any particular class of persons or for the injury of any other class. Discuss it kindly, temperately, earnestly. And if you think its benefits would reach poor and rich alike, non-landholder equally with the owner of the soil, damaging a few of all classes, but benefitting the majority of all, then

lend your influence to the passage of a law by the next Legislature, allowing the voters of this State to determine by townships whether they will preserve or abrogate the present fence laws.

ii. Count the consequences before you act. Consider that after the enactment proposed, horses, cattle, hogs and sheep must be confined. But remember also that this confinement of stock would be attended with much good. You would keep a smaller number of stock, but it would be vastly better stock. You would shelter your animals in winter and feed them better, so making double the quantity of manure you now make, and of twice the value. Some of you would surround pastures with fences. Others would keep up all stock in small enclosures. Large quantities of hay would have to be made for winter feeding. Soiling (as it is called) for cattle would come in vogue. Clover and the best grasses would be cultivated with the highest art and mowed and carried to stock. The hoofs of cattle destroy more grass than their mouths. Many families that now keep a half dozen cows, and yet are often without milk and butter, would then keep one cow only, and always have those luxuries in abundance. Neighbors would often cooperate in making pastures in common. Whether much timber and expense or little of either would be saved, would certainly depend on management; but I am of opinion that, in hundreds of townships, in this State, it would be possible to get rid of two-thirds of this fence burden that now oppresses the people.

iii. Our suggestion to the people, is that the abolition of fence laws would arrest the destruction of much valuable timber, that is now annually consumed in making fences around crops; that it would relieve production of much costly labor annually expended in these enclosures; that it would open to cultivation large areas of land that cannot now be utilized on account of the cost of fencing, thus cheapening rents to tenants, but compensating landlords, by giving them rents from a larger acreage; that it would enlarge the area of grass for winter use, when feed must be had from the barn or stack; that it would tend to the improvement of all kinds of farm animals, greatly improving the quality and increasing the value of milk, butter, meat and manure. My communications, Mr. Editor, have certainly effected a part of this purpose. They have set some persons to thinking and talking about the subject. They have drawn out friendly and pleasant criticisms from "Caswell" and "Quankey," and, as I happen to know, have awakened a general interest among the readers of the JOURNAL, on fence laws. More than this I had no idea of accomplishing when I began, and satisfied now with the result, for the present at least, I drop the subject.

RUSTICUS.

Wake County May 8th, '74.

**Thoughts for the Month of May.**

[Southern Cultivator.]

The work of preparation and planting being over, cultivation proper now begins. Where a proper rotation has kept the soil well filled with vegetable matter, [as it should always be,] and deep breaking has opened the way downward for the roots of plants, we remark in the first place that cultivation should be shallow. The reason for this is twofold—1st, to give all the soil possible, for the roots to spread in without being cut; 2d, to allow implements to be used which render it practicable to go over the largest area possible in a day. Why should we, by keeping the larger part of the soil proper constantly stirred, force the roots to forage in the comparatively poor subsoil.

Every one recognizes the imperative necessity, under our present farming arrangements of economizing labor; if therefore, anything like the same good results can be obtained by using a plough that will cut a 20 inch furrow, as one that cuts a 6 inch furrow, who would hesitate in choosing between them? Notwithstanding the opposition raised against the large "sweep" when first advocated before the public by Mr. Dickson, its use has become well nigh universal. At the North, the cultivator takes the place of the sweep, but the same idea underlies both, to-wit, rapid and superficial cultivation. The idea that land becomes hard when nothing but a sweep is used in cultivating a crop, is not sustained by experience, when the conditions laid down at the beginning of this article are present, viz., vegetable matter in the soil, and deep breaking in fall or winter. The only exceptions are old very stiff and flat lying lands with out humus. We cultivated cotton the past year on clay lands, in which nothing but a sweep ran after the cotton was planted, and found them the past winter as soft and mellow as any we ever saw under shovel and scooter regime.

**THE OBJECT OF CULTIVATION**

is, 1st, to kill grass and weeds. Whilst everyone knows that,—judging from what is often seen—everybody does not know the best